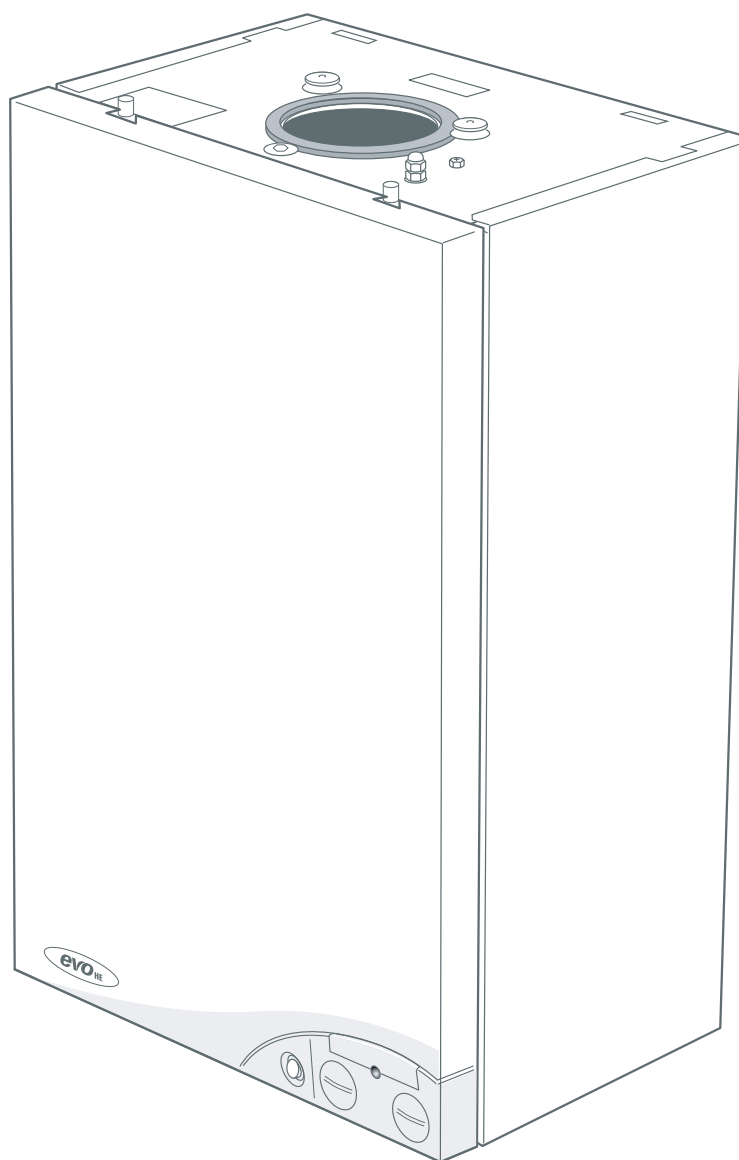




Advanced High Efficiency Boilers

C22/24, C22/30, C22/35

Wall mounted, balanced flue, fanned gas boiler



Users Guide

See reverse for **evo HE** Installation & Servicing Instructions

Manufactured exclusively for Wolseley Centers Ltd. by Ideal Boilers

evo HE C22/24, C22/HE30, C22/HE35

(Natural Gas Only)

Destination Countries: GB, IE

C22/HE24 G.C. Appliance No. 47-348-32

C22/HE30 G.C. Appliance No. 47-348-33

C22/HE35 G.C. Appliance No. 47-348-34

Introduction

The **evo HE** is a wall mounted, room sealed, condensing combination boiler, featuring full sequence automatic spark ignition and fan assisted combustion.

Due to the high efficiency of the boiler, condensate is produced from the flue gases and this is drained to a suitable disposal point through the plastic waste pipe at the lower rear of the boiler. A condensate 'plume' will also be visible at the flue terminal.

The **evo HE** is a combination boiler providing both central heating and instantaneous domestic hot water.

Safety

Current Gas Safety (Installation & Use)

Regulations or rules in force.

In your own interest, and that of safety, it is the law that this boiler must be installed by a Gas Safe Registered Engineer, in accordance with the above regulations.

In IE, the installation must be carried out by a Registered Gas Installer (RGII) and installed in accordance with the current edition of I.S. 813 "Domestic Gas Installations", the current Building Regulations and reference should be made to the current ETCI rules for electrical installation.

It is essential that the instructions in this booklet are strictly followed, for safe and economical operation of the boiler.

Electricity Supply

This appliance must be earthed.

Supply: 230 V ~ 50 Hz. The fusing should be 3A.

Connection must be made in a way that allows complete isolation of the electrical supply such as a double-pole switch, having a 3mm (1/8") contact separation in both poles, serving only the boiler and system controls. Alternatively, a 3-pin UNSWITCHED socket may be used. The means of isolation must be accessible to the user after installation.

Important Notes

- This appliance must not be operated without the casing correctly fitted and forming an adequate seal.
- If the boiler is installed in a compartment then the compartment MUST NOT be used for storage purposes.
- If it is known or suspected that a fault exists on the boiler then it MUST NOT BE USED until the fault has been corrected by a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).
- Under NO circumstances should any of the sealed components on this appliance be used incorrectly or tampered with.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

All Gas Safe Registered Engineers carry a Gas Safe Register ID card, and have a registration number. Both should be recorded in the **Benchmark** Commissioning Checklist. You can check your installer by calling Gas Safe Register direct on 0800 4085500

In cases of repeated or continuous shutdown a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII) should be called to investigate and rectify the condition causing this and carry out an operational test. Only the manufacturers original parts should be used for replacement.

Minimum Clearances

Clearances of **165mm (6 1/2")** above, **100mm (4")** below, **5mm (1/4")** at the sides and **450mm (17 3/4")** at the front of the boiler casing must be allowed for servicing.

The minimum front and bottom clearance allowed when built into a cupboard is 5mm.


To light the boiler. Refer to Frame 1



If a programmer is fitted refer to separate instructions for the programmer before continuing.


1. CHECK THAT THE ELECTRICITY SUPPLY TO THE BOILER IS OFF.
2. Set the mains ON/OFF switch (A) to OFF and the DHW thermostat knob (J) and CH thermostat knob (F) to maximum.
3. Ensure that all DHW taps are turned off.
4. Switch ON the electricity supply to the boiler and check that all external controls, e.g. programmer, room thermostat etc., are ON.
5. Set the mains ON/OFF switch to ON.

The boiler will commence the ignition sequence, first supplying heat to preheat the domestic hot water and then to the central heating, if required.

Note. In normal operation the control unit display (C) will show codes:


 Standby - no demand for heat.  CH being supplied.

 DHW being supplied.  DHW preheat.

 Boiler frost protection - boiler will fire if temperature is less than 3 degrees C.

During ignition, the LED (E) will flash.

During normal running the LED (E) will remain illuminated.

Note. If the boiler fails to light after 3 attempts this fault code will be displayed. 

Press the reset button (D) for 2 seconds then release. The boiler will repeat the ignition sequence. If the boiler still fails to light consult a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).

Operation

Winter conditions - i.e. CH and DHW required.

The boiler will fire and supply heat to the radiators but will give priority to DHW on demand.

The DHW preheat will operate as described under 'Summer conditions' during periods when there is no call for CH.

Ideal Stelrad Group is a member of the Benchmark scheme and fully supports the aims of the programme. Benchmark has been introduced to improve the standards of installation and commissioning of central heating systems in the UK and to encourage the regular servicing of all central heating systems to ensure safety and efficiency.

THE BENCHMARK SERVICE INTERVAL RECORD MUST BE COMPLETED AFTER EACH SERVICE



Summer conditions - i.e. DHW only required.

Set the thermostat knob to OFF.

The boiler will fire periodically for a few seconds to maintain the DHW calorifier in a preheated condition. The average time period between firing is 90 minutes. This may vary considerably due to the surrounding ambient temperature of the boiler. The boiler will fire whenever there is a demand for DHW.

Note. The pump will operate briefly as a self-check once every 24 hours, regardless of system demand.

Control of water temperature Domestic Hot Water

The DHW temperature is limited by the boiler controls to 65°C maximum at low draw-off rate, adjustable via the DHW thermostat knob (J).

Due to system variations and seasonal temperature fluctuations DHW flow rates/temperature rise will vary, requiring adjustment at the draw off tap : the lower the rate the higher the temperature, and vice versa.

Central Heating

The boiler controls the central heating radiator temperature to a maximum of 82°C, adjustable via the CH thermostat knob (F).

Approx. flow temperatures for the boiler thermostat settings are:

Knob Setting	Flow Temperature	
	°C	°F
Minimum	30	86
Maximum	82	180

To shut down the boiler

1. For short periods

Set the mains ON/OFF switch (A) to OFF

2. For longer periods

Set the mains ON/OFF switch (A) to OFF, and switch the electricity supply to OFF. For longer periods the entire system should be drained.

To relight the boiler

Repeat the procedure detailed in 'To light the boiler'.

Frost protection

If no frost protection is provided and frost is likely during a short absence from home, leave the heating controls (if fitted) at a reduced temperature setting. For longer periods, the entire system should be drained.

If the system includes a frost thermostat then, during cold weather, the boiler should be turned OFF at the time switch (if fitted) ONLY. The mains supply should be left switched ON, with the boiler thermostat left in the normal running position.

Boiler overheat thermostat

This thermostat will shut down the boiler in the event of overheating. Should this occur a fault code **L-P** or **L-Q** will be displayed. Press the reset button (D) and the boiler will relight. If the fault recurs, turn off the boiler and consult a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).

Flame failure

Should this occur a fault code **L-F** will be displayed. Press the reset button (D) and the boiler will relight. If the fault recurs, turns off the boiler and consult a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).

Loss of system water pressure

The gauge (H) indicates the central heating system pressure. If the pressure is seen to fall below the original installation pressure of 1-2 bar over a period of time then a water leak may be indicated. In this event conduct the re-pressurising procedure (see Trouble Shooting - Problem 4). If unable to do so or if the pressure continues to drop a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII) should be consulted.

DO NOT FIRE THE BOILER IF THE PRESSURE HAS REDUCED TO ZERO FROM THE ORIGINAL SETTING.

Condensate Drain

The condensate drain (G) must not be modified or blocked.

Blockage of the condensate drain, caused by debris or freezing, can cause automatic shutdown of the boiler.

If freezing is suspected and the pipe run is accessible an attempt may be made to free the obstruction by pouring hot water over the exposed pipe and clearing any blockage from the end of the pipe. If this fails to remedy the problem the assistance of a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII) should be sought.

Escape of gas

Should a gas leak or fault be suspected contact the National Gas Emergency Service without delay. **Telephone 0800 111 999**

Do NOT search for gas leaks with a naked flame.

Cleaning

For normal cleaning simply dust with a dry cloth.

To remove stubborn marks and stains, wipe with a damp cloth and finish off with a dry cloth.

DO NOT use abrasive cleaning materials.

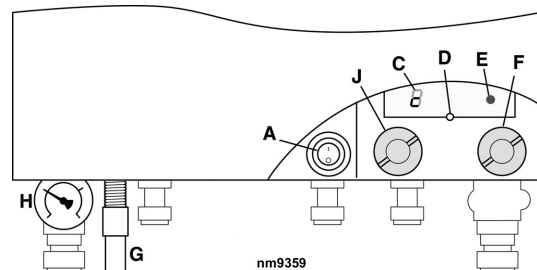
Maintenance

The appliance should be serviced at least once a year by a Gas Safe Registered Engineer or in IE a Registered Gas Installer (RGII).

1 BOILER CONTROLS

Legend

- | | |
|--------------------------|-------------------------|
| A. Boiler ON/OFF switch. | F. CH thermostat knob. |
| C. Display. | G. Condensate drain. |
| D. Reset button. | H. Pressure gauge. |
| E. LED. | J. DHW thermostat knob. |



CAUTION. To avoid the possibility of injury during the installation, servicing or cleaning of this appliance care should be taken when handling edges of sheet steel components.

POINTS FOR THE BOILER USER

Note. In line with our current warranty policy we would ask that you check through the following guide to identify any problems external to the boiler prior to requesting a service engineers visit. Should the problem be found to be other than with the appliance we reserve the right to levy a charge for the visit, or for any pre-arranged visit where access is not gained by the engineer.

TROUBLESHOOTING - TYPICAL NON PRODUCT FAULTS

	Problem	Solution
1	Boiler is not working for central heating or hot water.	<ul style="list-style-type: none"> Check there is power to the boiler – switch (A) in the ON position and 'O' displayed on the controls. If 'O' not displayed then not a boiler fault – contact your installer/service company.
2	Boiler is not working for central heating or hot water but attempts to fire by going through 3 ignition attempts. Display shows 'L:F' (flashing).	<ul style="list-style-type: none"> Press reset button (D) for 2 seconds to repeat ignition sequence. Check gas supply (try another appliance – cooker/fire etc.) – If no gas supply then not a boiler fault – contact gas supplier. Check condensate pipe is not blocked or frozen. If blocked clear blockage – if not possible to check contact your installer.
3	Boiler is not working for central heating or hot water and the display shows 'L:A' (flashing).	<ul style="list-style-type: none"> Press reset button (D) for 2 seconds, the boiler should then re-light. If fault recurs this indicates an overheat condition. The boiler should be turned off and your installer contacted. Check if ALL radiators have thermostatic radiator valves fitted. If they have contact your installer.
4	Boiler is not working for central heating or hot water and the display shows 'H:A' (flashing).	<ul style="list-style-type: none"> Check pressure gauge on boiler shows a minimum of 1 bar. If not re-pressurise via the filling loop to 1 bar (if unsure contact your installer), turn off the tap on the filling loop and turn the on/off switch (A) off and then back on again to reset the boiler. If unable to do so or if the pressure continues to drop after filling then contact your installer. Check if ALL radiators have thermostatic radiator valves fitted. If they have contact your installer.
5	Boiler will not fire for central heating.	<ul style="list-style-type: none"> Check external programmer is set to an 'ON' period. If already set to an 'ON' period then check the programmer by setting to continuous if boiler then fires – Contact your installer to rectify the programmer. Check room thermostat by turning fully up, If 'O' is not displayed on the user controls then contact your installer.
6	Boiler comes on for domestic hot water without a tap being opened - the display shows 'O'.	<ul style="list-style-type: none"> Check for dripping / dribbling taps or showers – turn fully off. Check for leaks from the domestic hot water pipework and if found contact your installer.
7	Boiler fires occasionally for approx. 2 minutes - the display shows 't'.	<ul style="list-style-type: none"> This is a normal function of the boiler to periodically pre heat the plate heat exchanger to optimise delivery time for domestic hot water to taps or showers.

The nature of all combination boilers is to heat up water directly from the incoming mains water supply directly through the boiler to supply domestic hot water at the stated flow rates, (as shown in the boiler installation instructions), to achieve a 35°C temperature rise. As the ambient temperature of the cold main varies during the summer and winter months it is likely in the colder winter months that the flow rate will need to be reduced at the outlet taps to achieve the same temperatures achieved in the warmer summer months. **This is not a fault with the appliance but is relevant to the varying temperature of the incoming cold mains water supply.**



The code of practice for the installation, commissioning & servicing of central heating systems



Wolseley Consumer Helpline 0870 849 8057